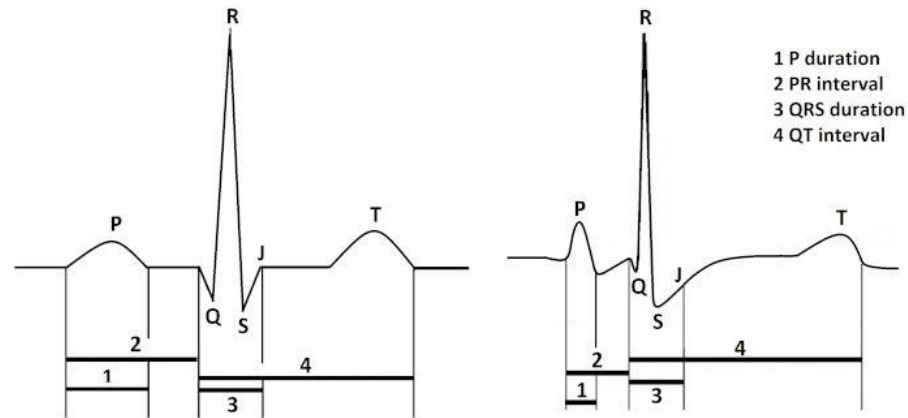
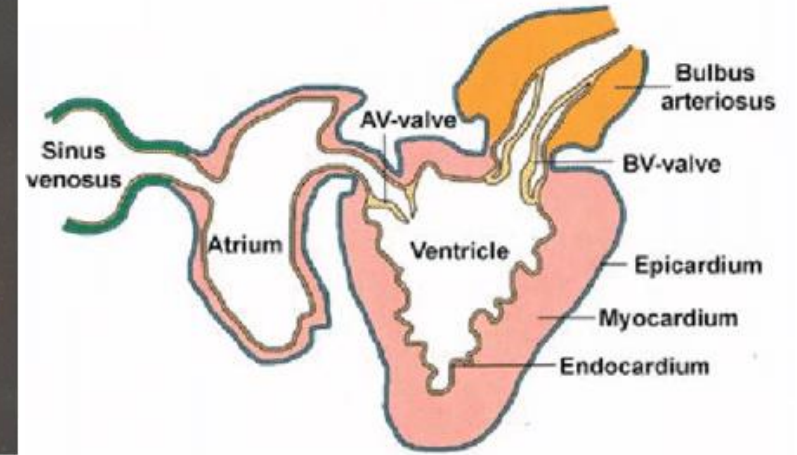
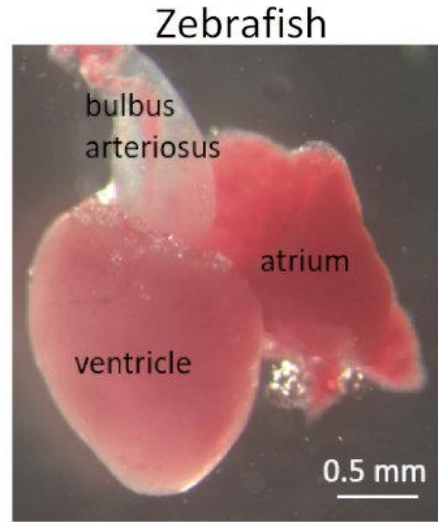
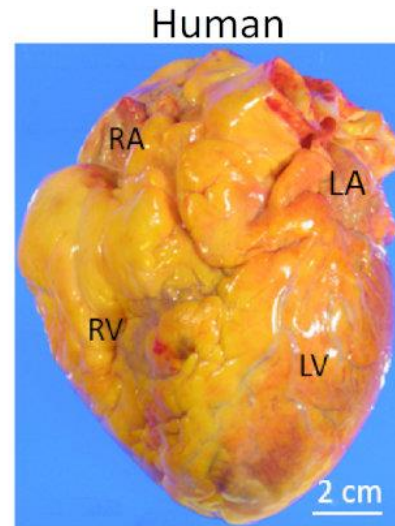
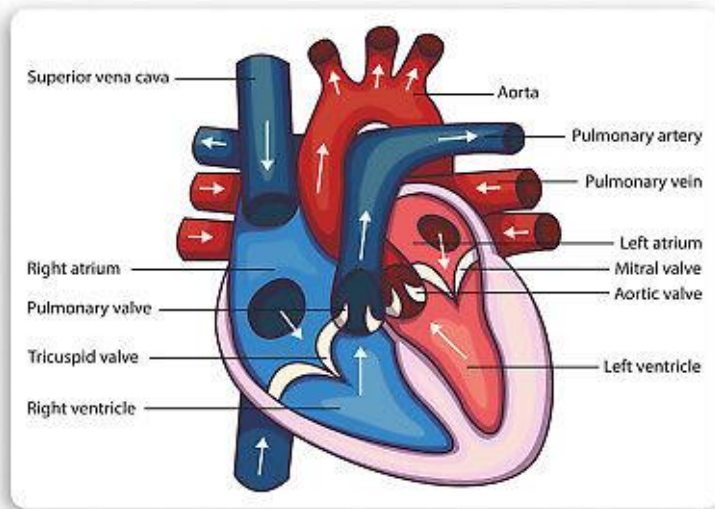
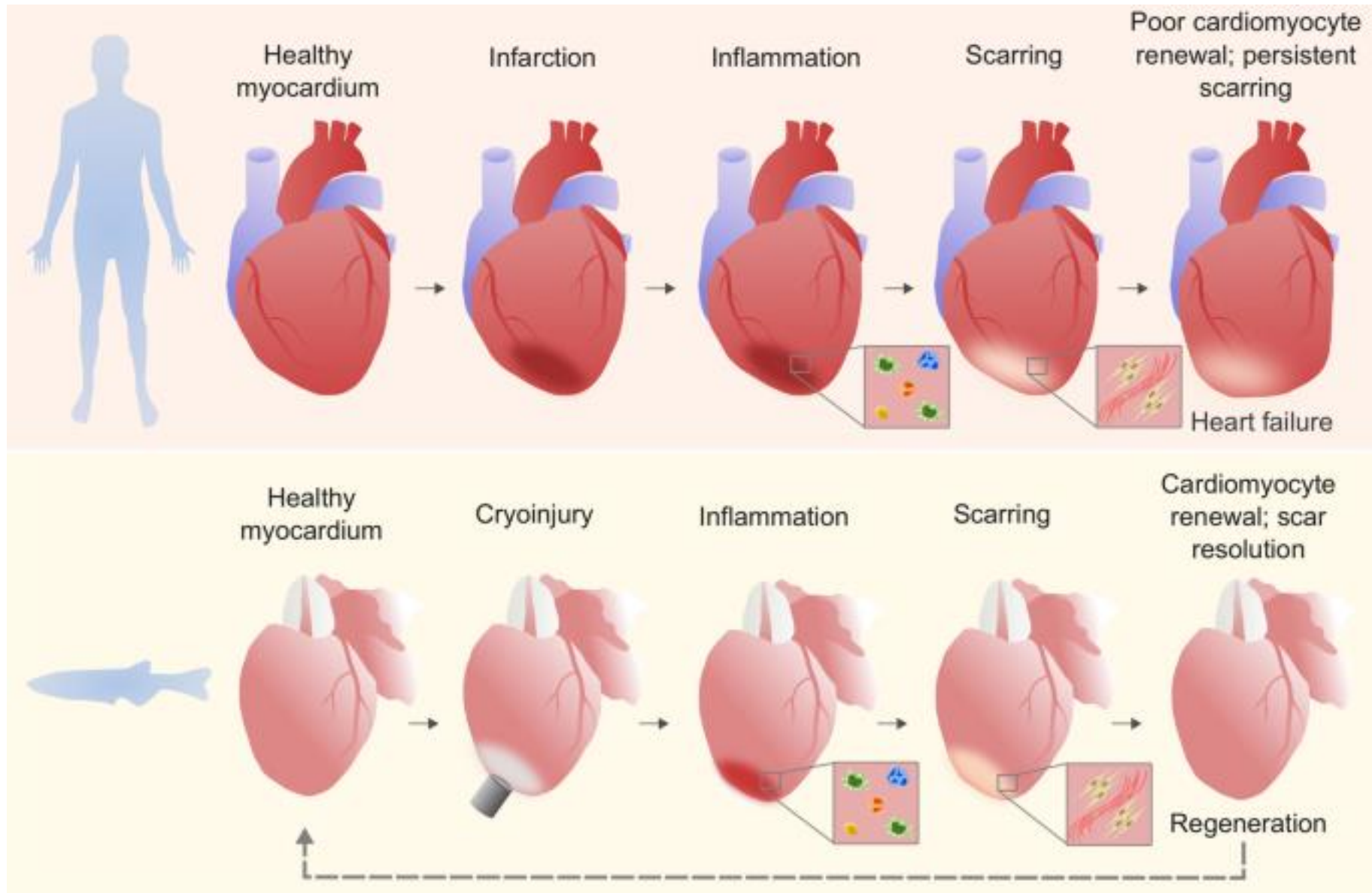


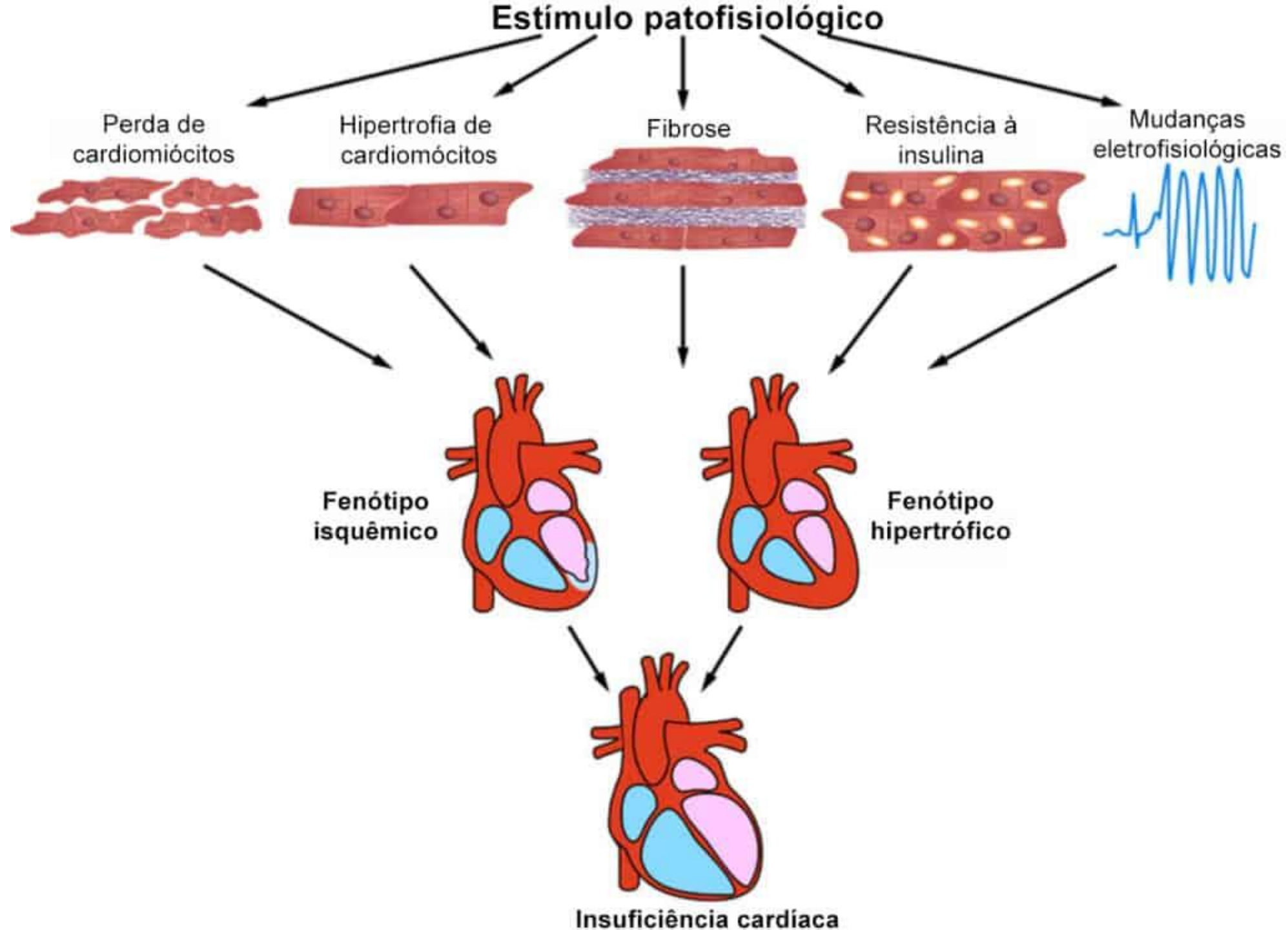
Aula P9 – 9 de Maio: coração I

Histologia cardíaca e cardiomiócitos induzidos: cardióides



Regeneração do coração

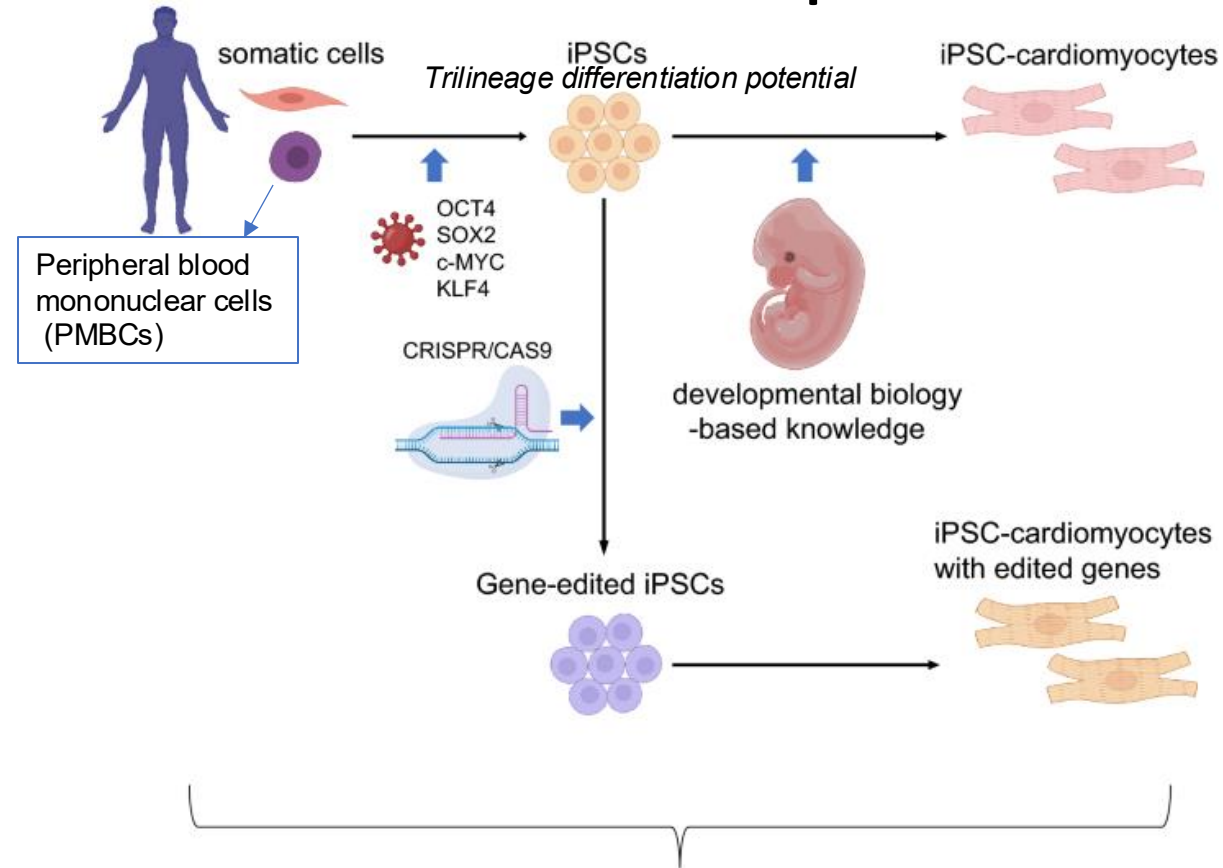




Células estaminais induzidas para cardiomiócitos

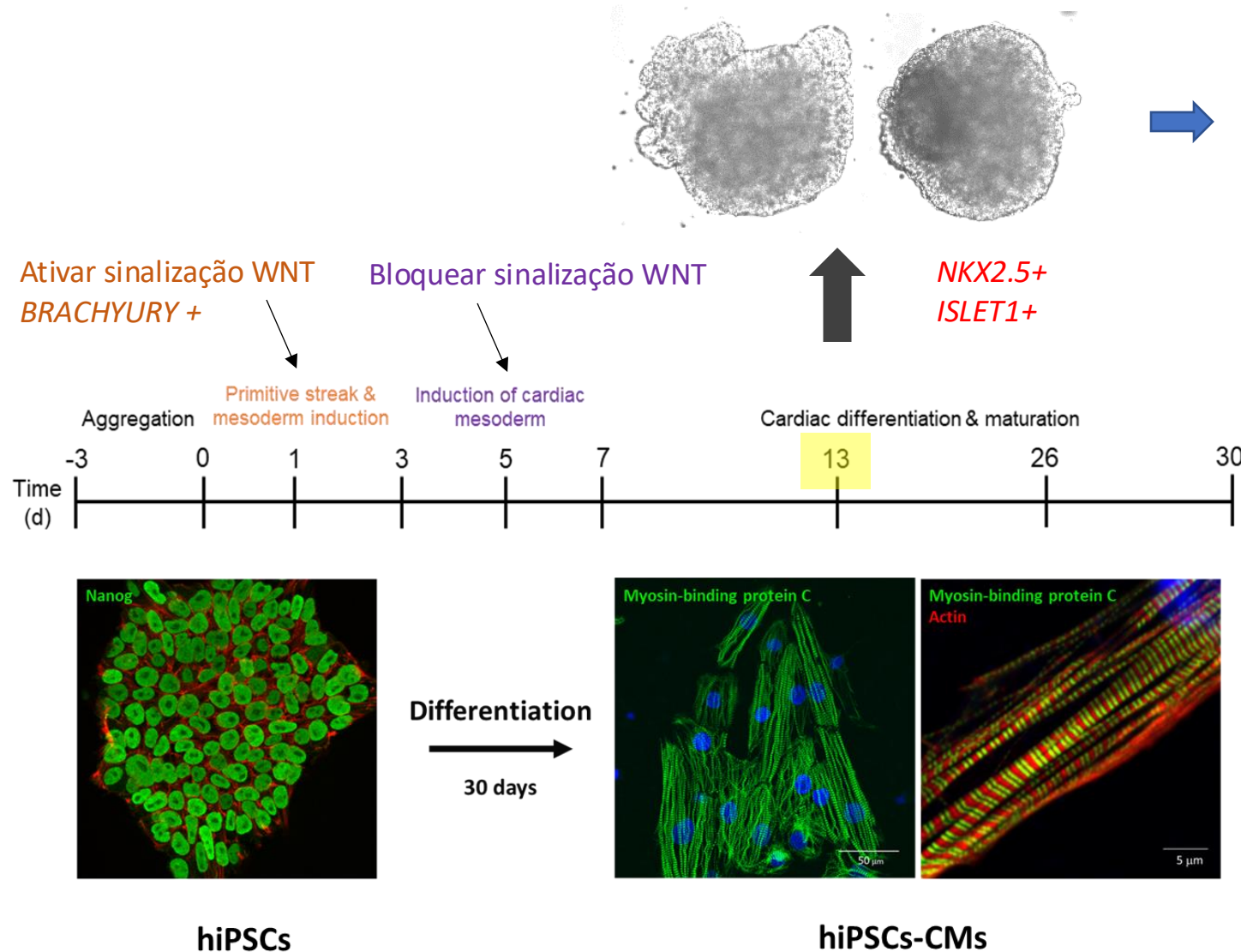
Shinya Yamanaka was awarded the 2012 Nobel Prize along with Sir [John Gurdon](#) "for the discovery that mature cells can be reprogrammed to become pluripotent."

In his Nobel seminar, Yamanaka cited the earlier seminal work of [Harold Weintraub](#) on the role of [myoblast determination protein 1](#) (MyoD) in reprogramming cell fate to a muscle lineage as an important precursor to the discovery of iPSCs



Para que servem estes cardiomiócitos?

hiPSCs-CMs: Marta's project at IMM



> PLoS One. 2011;6(8):e23657. doi: 10.1371/journal.pone.0023657. Epub 2011 Aug 18.

Efficient and scalable purification of cardiomyocytes from human embryonic and induced pluripotent stem cells by VCAM1 surface expression

Hideki Uosaki¹, Hiroyuki Fukushima, Ayako Takeuchi, Satoshi Matsuoka, Norio Nakatsuji, Shinya Yamanaka, Jun K Yamashita

Affiliations + expand

PMID: 21876760 PMCID: PMC3158088 DOI: 10.1371/journal.pone.0023657

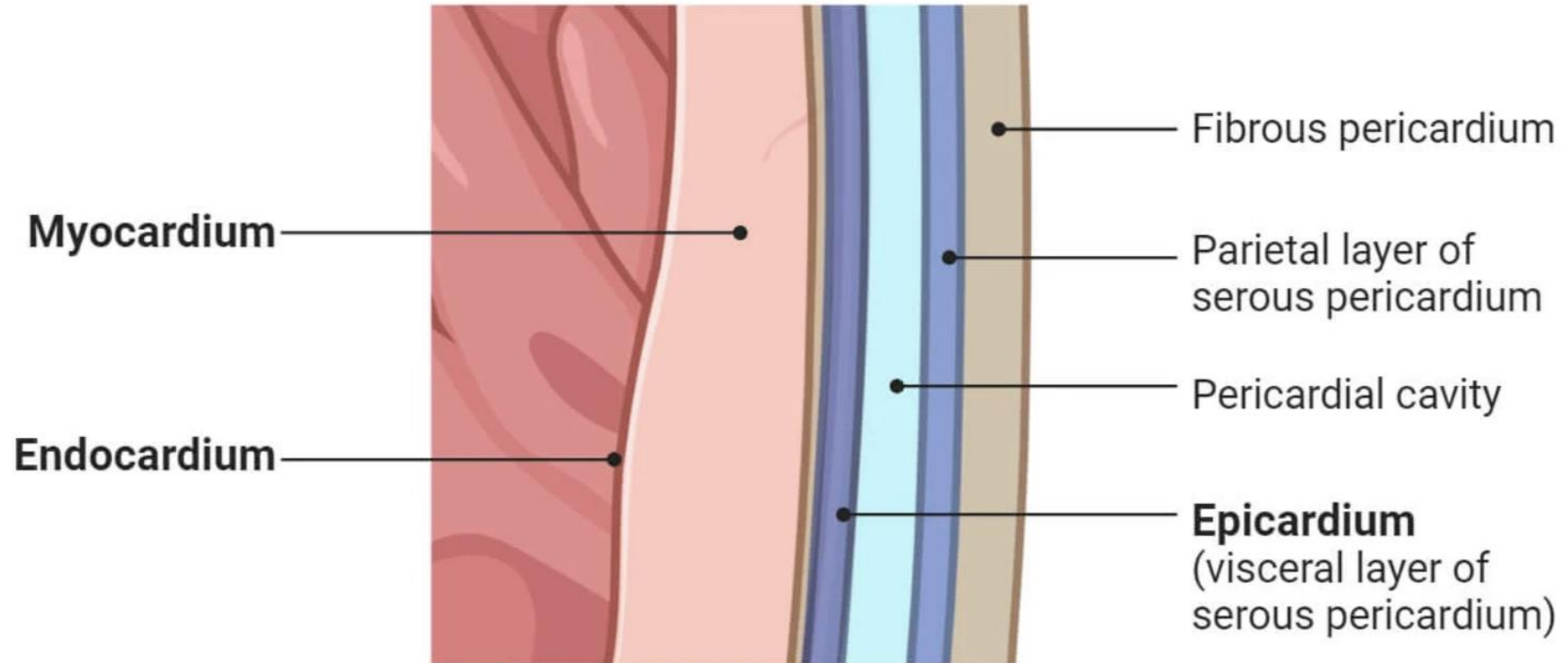
Fluorescent activated cell sorting (FACS)
Using VCAM1 to enrich for cardiomyocytes

<https://youtu.be/PFeAhLJ1vL0>

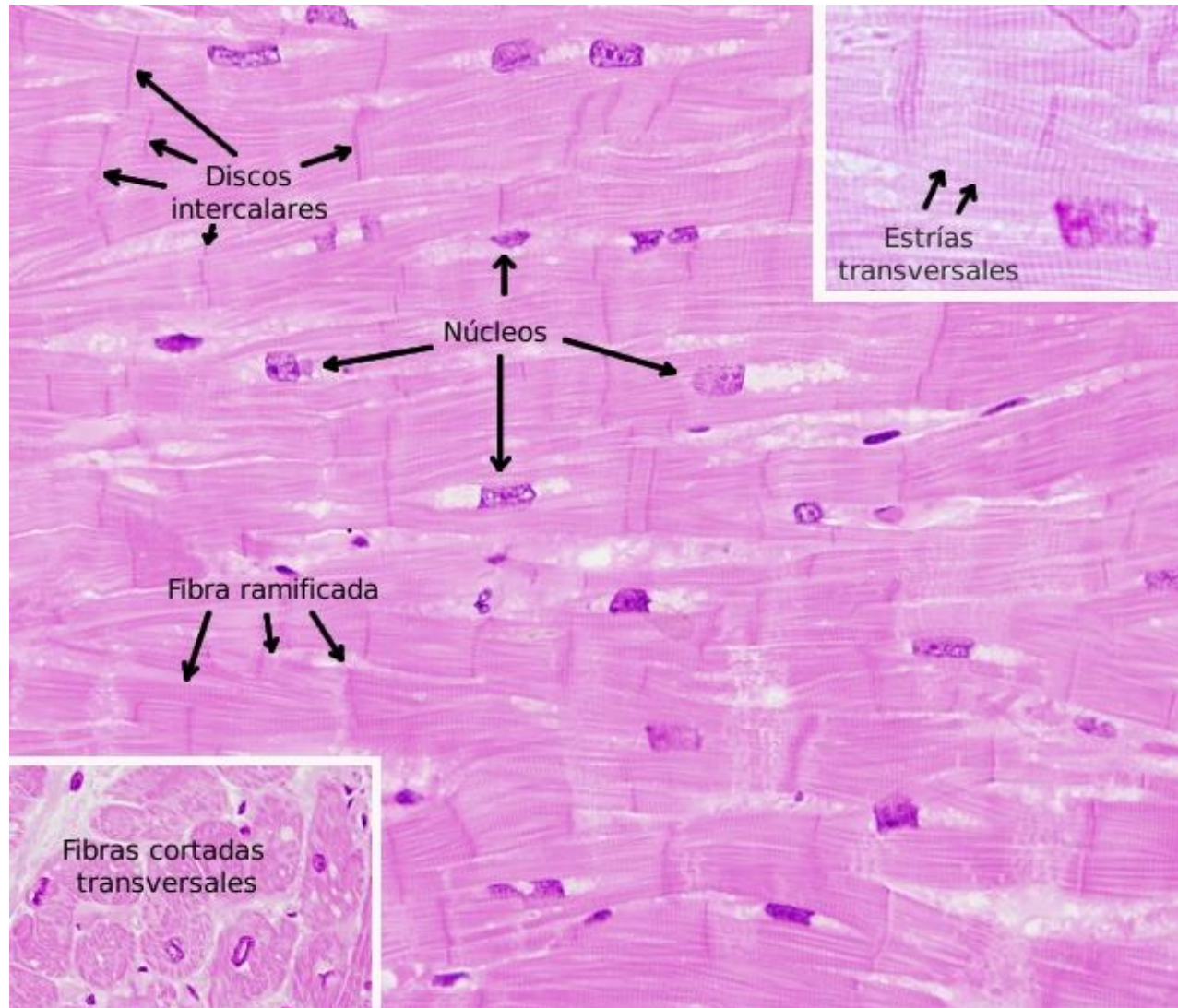
Disease modelling in cardiomyopathies:

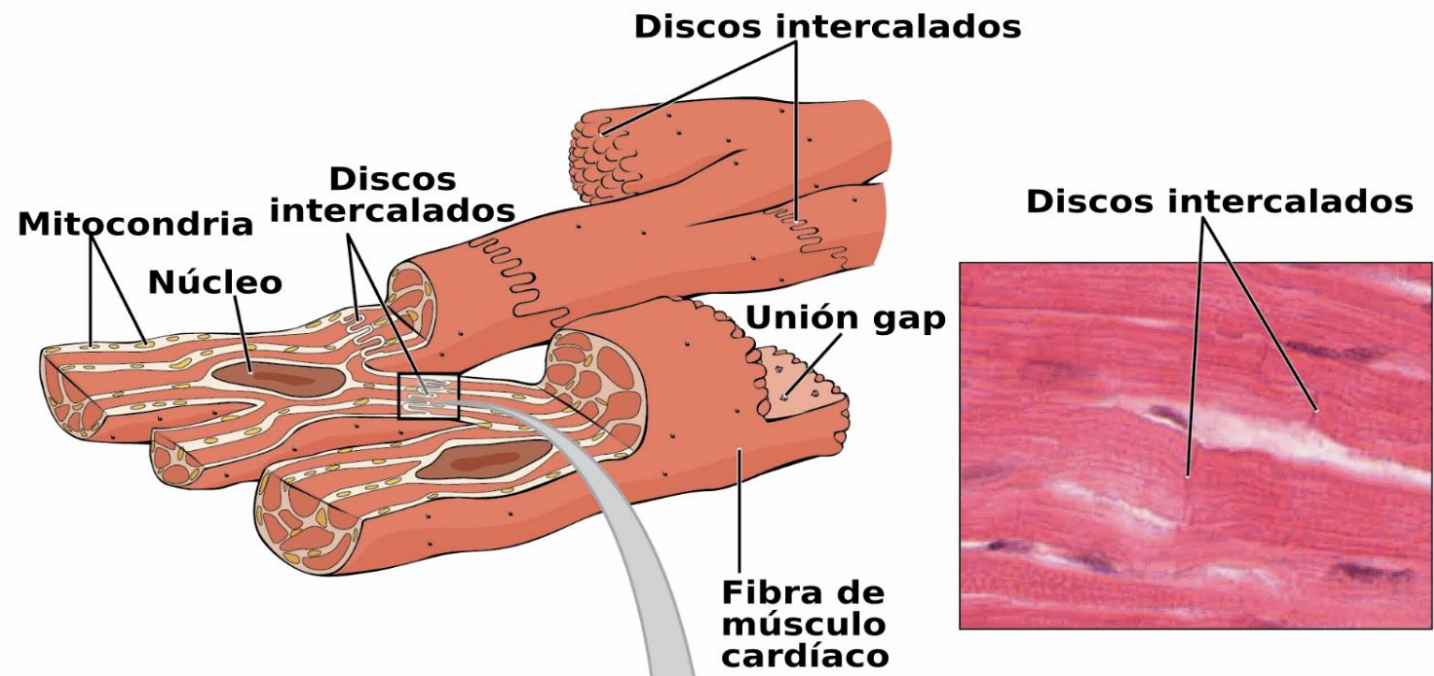
- Transcriptomics
- Morphology
- Calcium transients
- Metabolism
- Drug discovery

Heart Layers



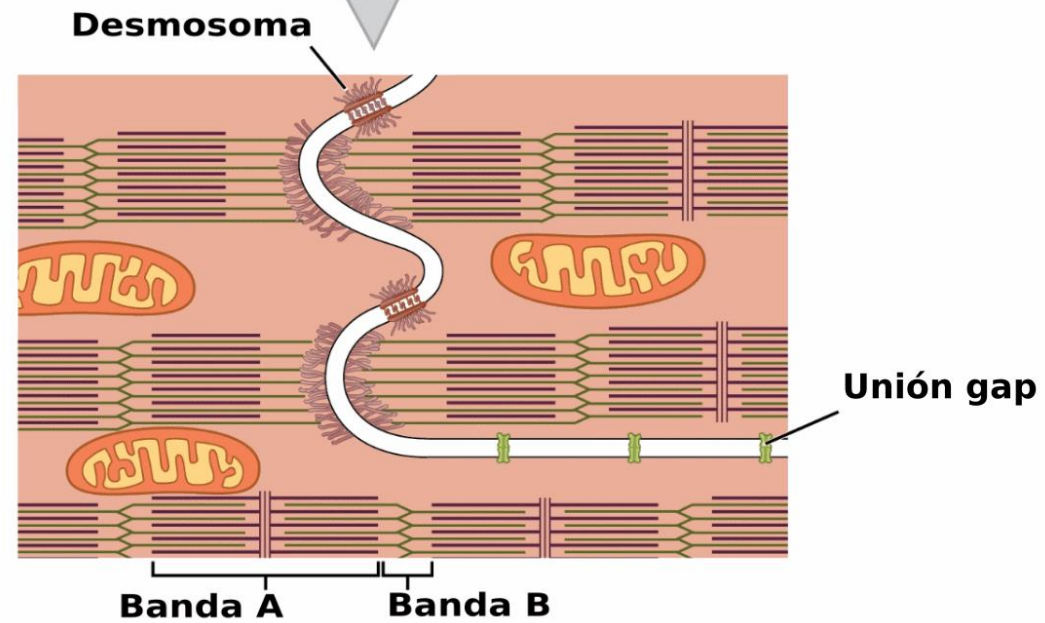
Histología de músculo cardíaco





(a)

(b)



(c)